

ONTARIO MINISTRY OF ENVIRONMENT



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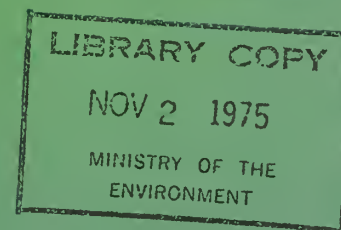
OPERATING SUMMARY

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1974
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TOWN OF PRESCOTT

WATER POLLUTION CONTROL PLANT

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MINISTRY OF THE ENVIRONMENT



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**TD
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.A56
P747
1974**

Prescott : water pollution control
plant.

81802



MINISTRY OF THE ENVIRONMENT

MINISTER
Honourable William G. Newman

DEPUTY MINISTER
E. Biggs

ASSISTANT DEPUTY MINISTER
REGIONAL OPERATIONS
J. Barr

REGIONAL OPERATIONS DIVISION

DIRECTOR, SOUTHEASTERN REGION
C.E. McIntyre

MANAGER, UTILITY OPERATIONS
A. Symmonds

PRESCOTT
WATER POLLUTION CONTROL PLANT

MINISTRY OF THE ENVIRONMENT

1974 ANNUAL OPERATING SUMMARY

prepared by

Plant Performance Unit

TECHNICAL SERVICES BRANCH

T. Cross, Director

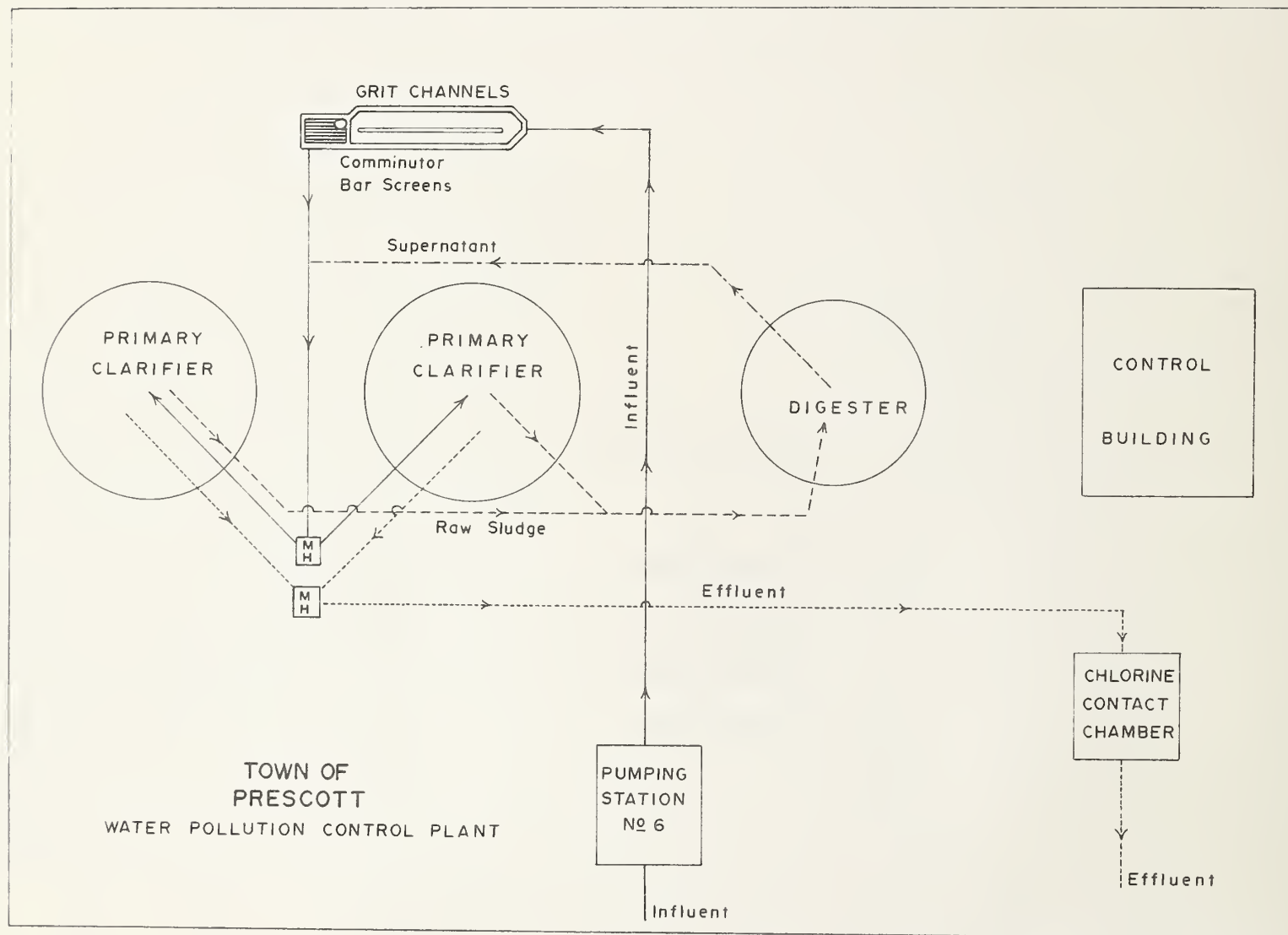


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DESIGN DATA

PROJECT Town of Prescott WPCP

PROJECT NO. 1-0023-66

TREATMENT Primary

DESIGN FLOW 1.0 MIGD

PRIMARY TREATMENT

Grit Removal

Type: Manually cleaned
Size: Two 26'2" x 3'9" x 3'4"
Flow Velocity: 1.0 fps

Screening

Type: Manually cleaned
Size: 1" openings

Comminution

Type: Worthington #15-5

Primary Sedimentation

Type: Dorr-Oliver
Size: Two 35' dia x 9' swd.
(108,000 I. gals. total)
Retention: $2\frac{1}{2}$ hours
Loading: Surface 1,000 I. gals/
ft²/day
Weir, 10,000 I. gals/
ft/day

CHLORINATION

Type: Wallace & Tiernan A-831
Size: Two 50 lbs/day each

Chlorine Contact Chamber

Size: 33,800 gal.
Retention: 30 minutes

OUTFALL

1650' 42" dia. concrete pipe to
St. Lawrence River

SLUDGE HANDLING

Digestion System

Type: Single stage
Size: 35' dia x 18 swd (108,000 I. Gals)
Loading: 1.6 lb/ft³/mo.
Recirculation Pump: Smart Turner

PUMPING STATION

a) West Street

Two Smart-Turner, each 870 IGPM @ 36' tdh

b) East Street

Two Smart-Turner, each 1410 IGPM @ 44' tdh

c) Highway 2 & Keefer Street

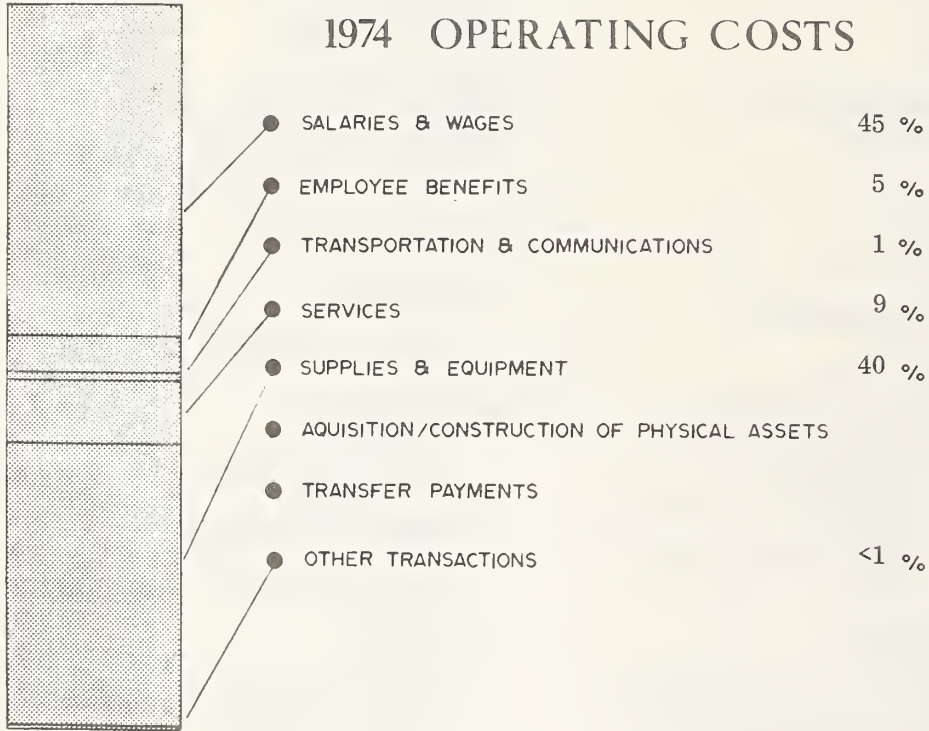
Two Smart-Turner, each 2100 IGPM @ 76' tdh

d) Plant Site

Three Smart-Turner, 1400 IGPM @ 33' tdh

ANNUAL COSTS

1974 OPERATING COSTS



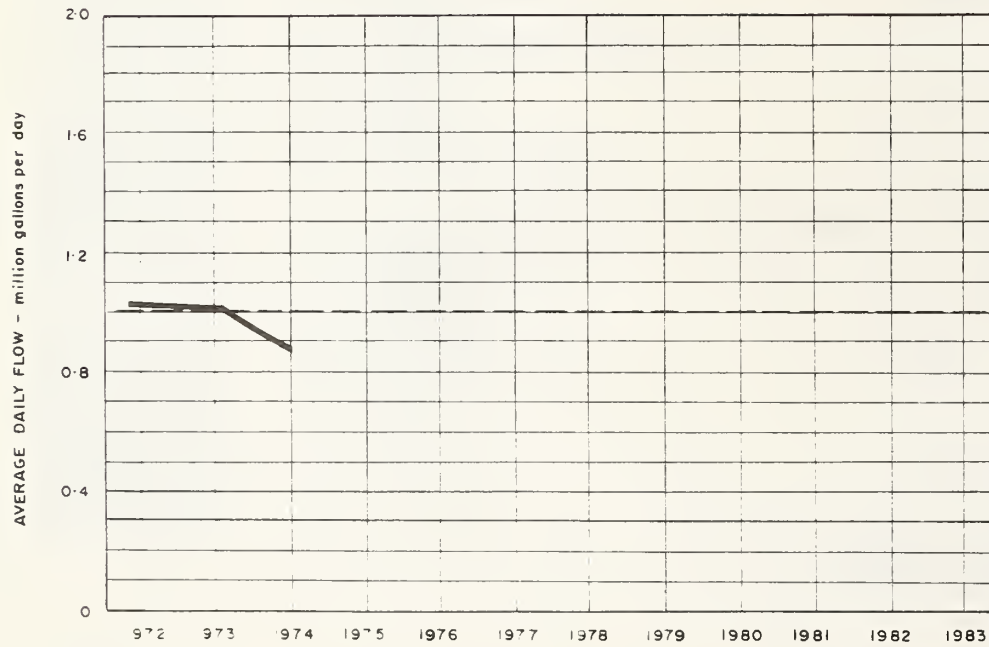
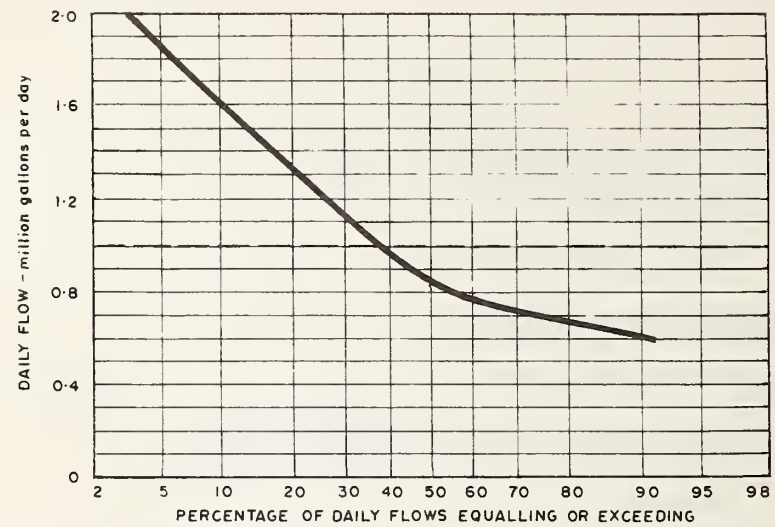
YEARLY OPERATING COSTS

YEAR	SEWAGE TREATED in million gallons	TOTAL OPERATING COSTS	UNIT COSTS	
			\$/M.G	¢/lb BOD
1974	326.7	51,687	158	31

OPERATING EXPENDITURES

Regular Staff	\$ 23,303	\$
Casual (Unclassified) Staff	<u> </u>	
TOTAL SALARIES AND WAGES		<u>23,303</u>
TOTAL EMPLOYEE BENEFITS		<u>2,414</u>
TOTAL TRANSPORTATION AND COMMUNICATIONS		<u>771</u>
Insurance	<u>616</u>	
Sludge Haulage	<u>255</u>	
Repairs and Maintenance	<u>2,277</u>	
Other Services	<u>1,435</u>	
TOTAL SERVICES		<u>4,583</u>
Machinery and Equipment	<u>4,452</u>	
Chemicals	<u>3,090</u>	
Utilities	<u>10,046</u>	
Other Supplies and Equipment	<u>2,913</u>	
TOTAL SUPPLIES AND EQUIPMENT		<u>20,501</u>
TOTAL AQUISITION/CONSTRUCTION OF PHYSICAL ASSETS		<u> </u>
TOTAL TRANSFER PAYMENTS		<u> </u>
OTHER TRANSACTIONS		<u>115</u>
GRAND TOTAL	GRAND TOTAL	\$ <u>51,687</u>

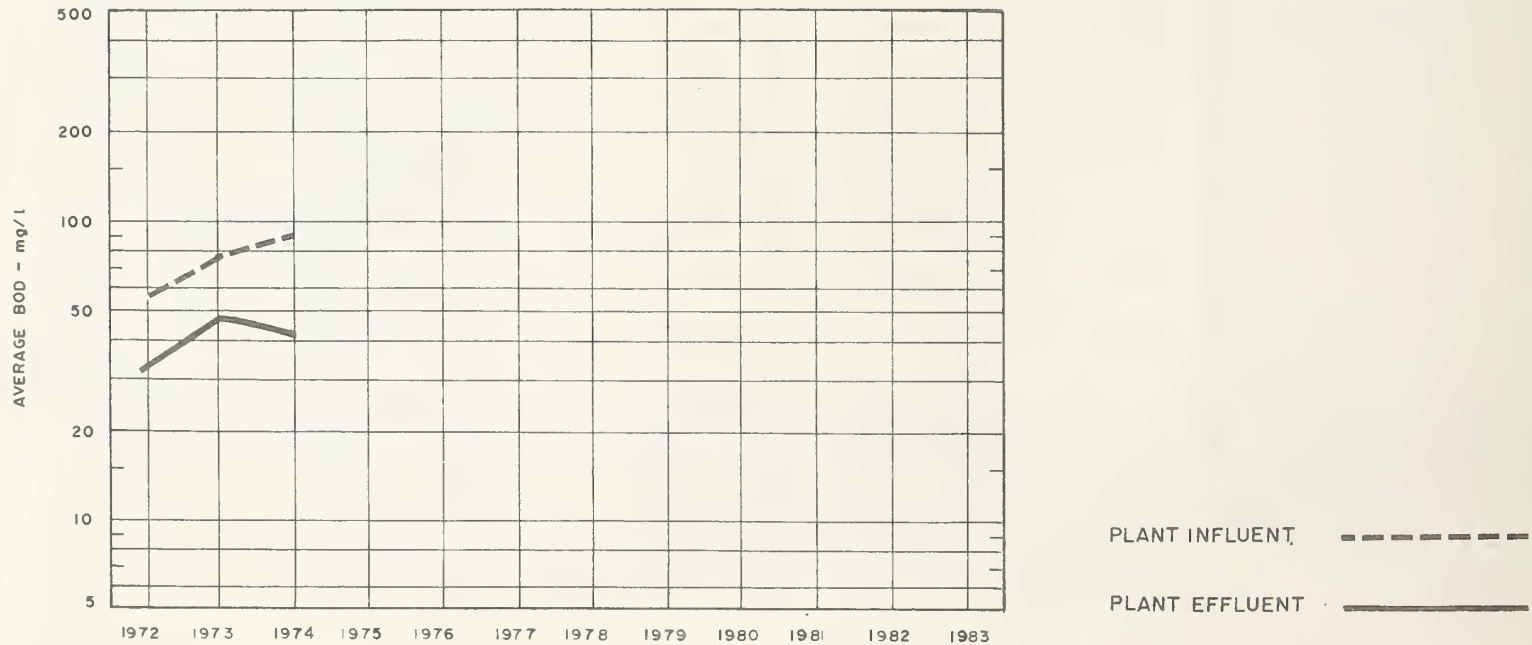
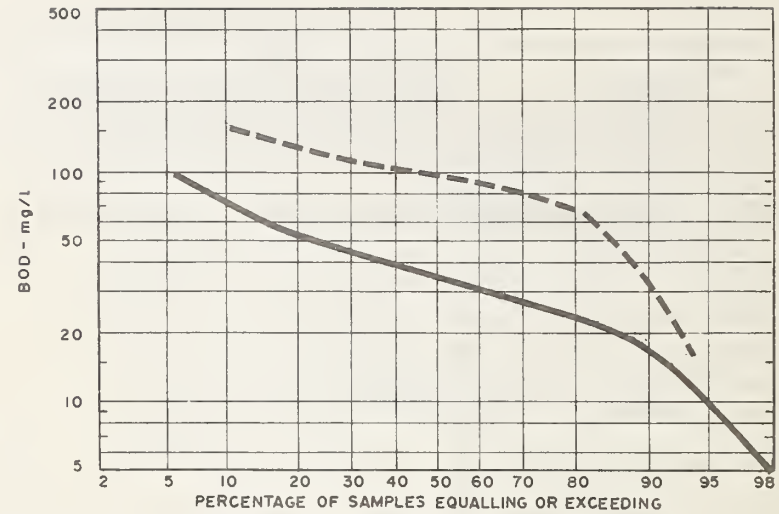
FLOWS



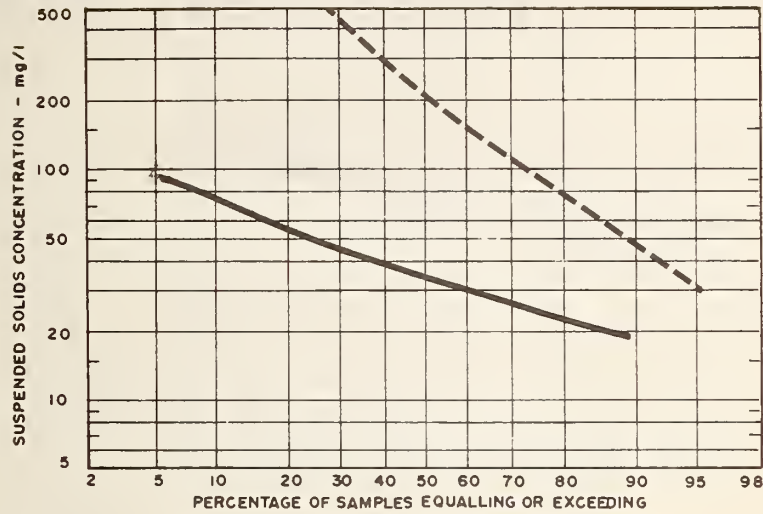
PLANT PERFORMANCE

MONTH	FLOWS			BIOCHEMICAL OXYGEN DEMAND				SUSPENDED SOLIDS				PHOSPHORUS	
	TOTAL FLOW million gallons	AVERAGE DAY mil. gal	MAXIMUM DAY mgd	INFLUENT mg/l	EFFLUENT mg/l	REDUCTION		INFLUENT mg/l	EFFLUENT mg/l	REDUCTION		INFLUENT mg/l P	EFFLUENT mg/l P
						%	10 ³ pounds			%	10 ³ pounds		
JAN	35.79	1.15	2.69	115	55	52	21	160	60	63	36	4.0	2.0
FEB	26.27	.94	1.85	85	61	57	6	180	77	57	27	3.3	2.5
MAR	37.30	1.20	2.41	85	28	67	21	800				2.1	1.3
APR	23.56	1.53	3.38	57	31	46	6	77	55	28	5	2.3	1.7
MAY	38.81	1.25	2.01	175	46	74	50	110	40	64	27	2.0	1.3
JUNE	26.07	.87	1.10	185	105	43	21	140	40	71	26	1.9	1.4
JULY	21.70	.70	.91	90	21	76	15	205	125	39	17	4.0	3.0
AUG	19.84	.64	.73	15	5	66	2	150	40	73	22	.4	.2
SEPT	20.49	.66	.84	87	41	53	9	150	50	67	20	2.6	2.2
OCT	20.87	.67	.83	110	50	54	12	160	75	53	18	2.3	1.6
NOV	26.43	.88	1.71	108	40	63	18	155	60	61	25	3.6	1.8
DEC	29.53	.95	2.00					155	45	71	32	2.5	1.7
TOTAL	326.66	-	-	-	-	-		-	-	-		-	-
AVG.	27.22	.89	MAXIMUM 3.38	94	43	54	15	184	66	64	35	2.8	1.9
No. of Samples	-	-	-	17	17	-	-	18	17	-	-	18	18

BIOCHEMICAL OXYGEN DEMAND

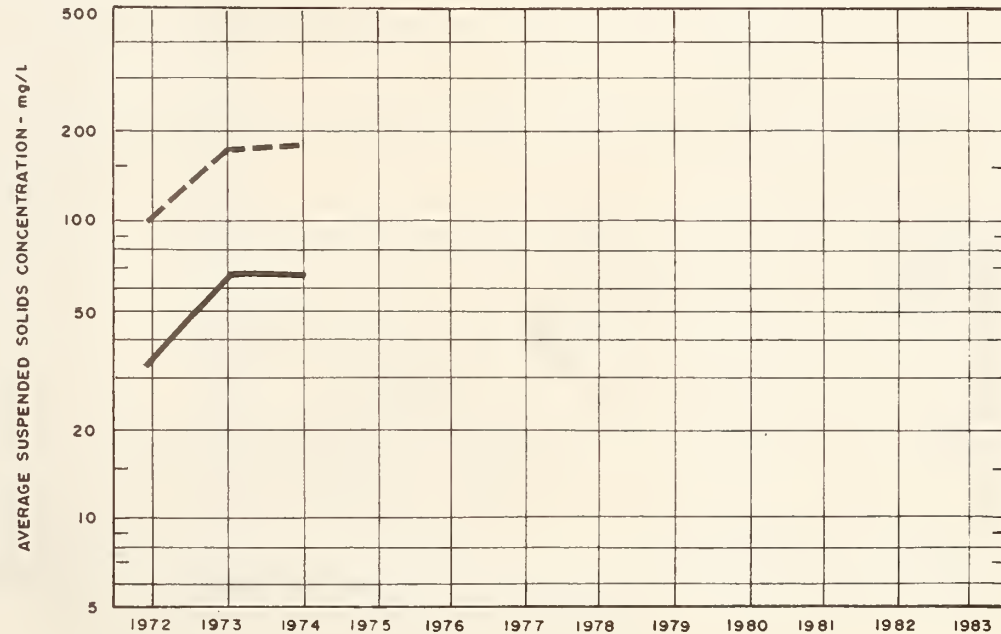


SUSPENDED SOLIDS

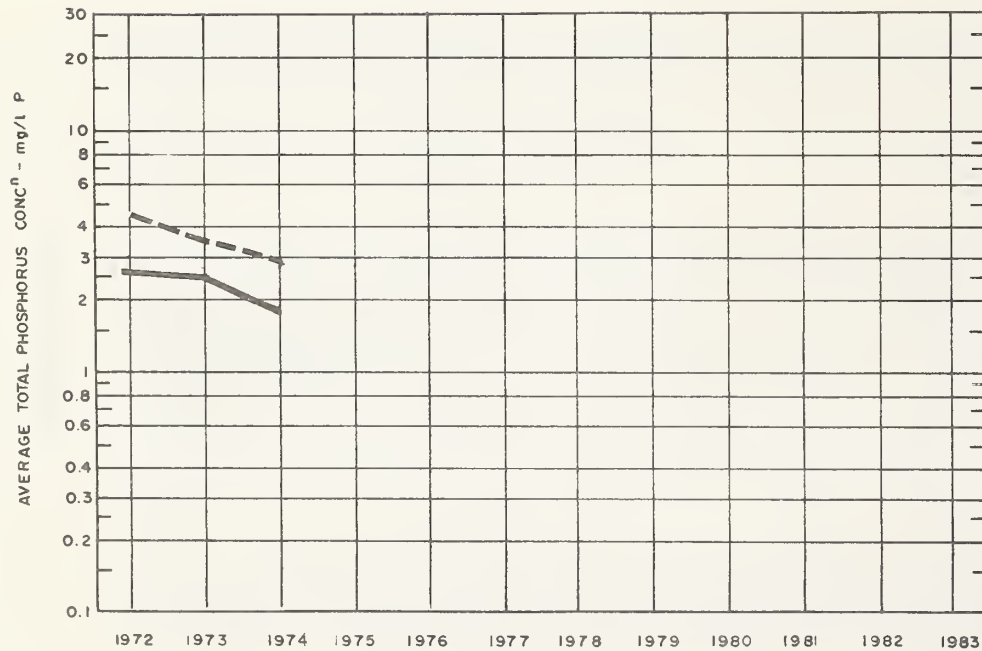
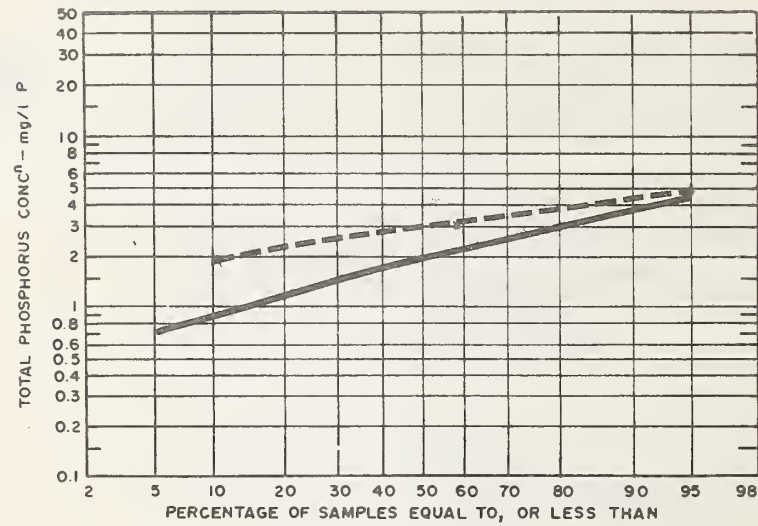


PLANT INFLUENT - - - - -

PLANT EFFLUENT —————



PHOSPHORUS

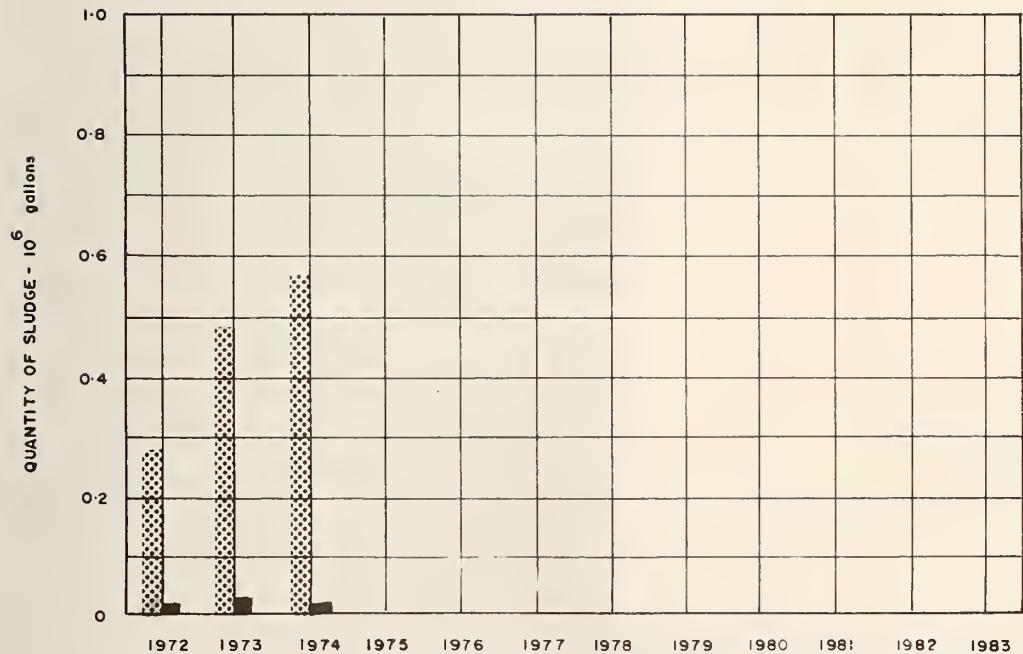
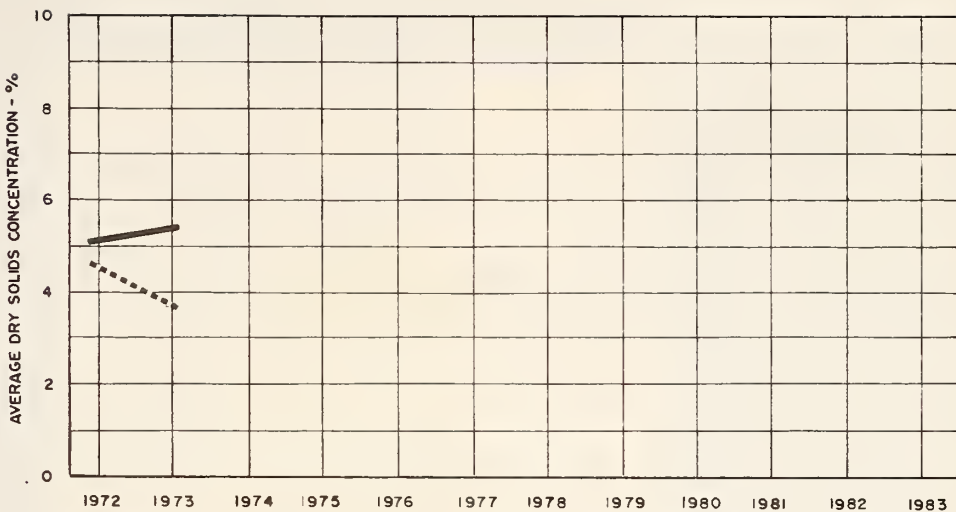


PLANT INFLUENT

PLANT EFFLUENT

DIGESTION

RAW SLUDGE
DIGESTED SLUDGE —————



RAW SLUDGE TO DIGESTER

DIGESTED SLUDGE REMOVED

TREATMENT DATA

	GRIT	CHLORINATION		SLUDGE DIGESTION and DISPOSAL							
MONTH	QUANTITY REMOVED cubic feet	CHLORINE USED 10 ³ pounds	AVERAGE DOSAGE mg/l	RAW SLUDGE			DIGESTED SLUDGE			SUPERNATANT	SLUDGE HAULED cubic yards
				QUANTITY 10 ³ gallons	TOTAL SOLIDS %	VOLATILE SOLIDS %	QUANTITY REMOVED 10 ³ gallons	TOTAL SOLIDS %	VOLATILE SOLIDS %	TOTAL SOLIDS %	
JAN	30	1.7	4.6	50			1.3				8
FEB	22	1.1	4.0	46			1.3				8
MAR	14	1.8	4.9	50			1.3				8
APR	45	2.3	9.8	48			2.7				16
MAY	25	1.9	5.0	49			1.7				10
JUNE	20	1.4	1.4	48			1.3				8
JULY	11	1.0	4.9	50							
AUG		1.0	5.0	50							
SEPT	16	1.1	5.5	48							
OCT	9	1.1	5.2	50							
NOV	8	1.3	5.0	48							
DEC	16	1.4	4.9	51			1.7				10
TOTAL	216	17.1	—	588	—	—	11.3	—	—	—	68
AVG.	.7 cubic feet/mil gal	1.4	5.2	49			.9				6

Date Due

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